UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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			EXAMINER
20350 7590 08/25/2006			ENGLAND, DAVID E

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ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _05/30/2006_.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under _Ex parte Quayle_, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1 – 12, 14, 17 – 26, 29, 37 – 62 and 65 – 94_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1 – 12, 14, 17 – 26, 29, 37 – 62 and 65 – 94_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____. .

DETAILED ACTION

1.   Claims 1 – 12, 14, 17 – 26, 29, 37 – 62 and 65 – 94 are presented for examination.

Drawings

2.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "each packet payload transmitted at any particular time to some or all of the plurality of clients is independent of which packet payloads has been previously correctly received by various ones of the clients, and wherein each of the plurality of clients is capable of reconstructing the content after correctly receiving a number of different output symbols sufficient in quantity to reconstruct the data to a desired accuracy from those different output symbols" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The

objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4.   Claims 1 – 12, 14, 17 – 26, 29, 37 – 62 and 65 – 94 are rejected under 35 U.S.C. 112, first

paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject

matter which was not described in the specification in such a way as to enable one skilled in the

art to which it pertains, or with which it is most nearly connected, to make and/or use the

invention.

5.   Claims 1, 38, 44, 56, 65, 67, 72, 75, 87 and 93 recite the limitations of, "each packet

payload transmitted at any particular time to some or all of the plurality of clients is independent

of which packet payloads has been previously correctly received by various ones of the clients,

and wherein each of the plurality of clients is capable of reconstructing the content after correctly

receiving a number of different output symbols sufficient in quantity to reconstruct the data to a

desired accuracy from those different output symbols", is not enabled in the specification. More

specifically, the limitation of "wherein each of the plurality of clients is capable of

reconstructing or regenerating the content after correctly receiving a number of different

output symbols sufficient in quantity to reconstruct the data to a desired accuracy from those

different output symbols". Nowhere in the specification would one of ordinary skill in the art be

able to reconstruct/ make or use the invention, specifically, the specification does not explain

how it is possible to **reconstruct or regenerate** the content after receiving a number of different

output symbols sufficient in quantity.

6.   Applicant is asked to point to the specification and drawings as to where this limitation is

found or amend these limitations out.

7.   Claims 78 and 90 recite the limitations of, "wherein regenerating the content to a desired

accuracy includes: after receiving a J1 number of the first output symbols in packets randomly or

pseudorandomly received from the first stream of packets, wherein J1 is a positive integer

greater than 1 and less than J, regenerating the first input symbols to a desired accuracy with the

received first output symbols, after receiving a K1 number of the output symbols in packets

received randomly or pseudorandomly from the second stream of packets, wherein K1 is a

positive integer greater than 1 and less than K, regenerating the second input symbols to a

desired accuracy with the received second output symbols," is not enabled in the Applicant's

specification. Similar to the above rejection, there is no section in the specification that would

lead one of ordinary skill in the art to determine how to regenerate a first or a second input

symbols to a "desired accuracy".

8.   Applicant is asked to point to the specification and drawings as to where this limitation is

found or amend these limitations out.

9.   Claims 1 – 12, 14, 17 – 26, 29, 37 – 62 and 65 – 94 recite the limitations, or are

dependent from the limitations of input and output "symbols encoded with data generated from

the content". There is not steps in the specification as to what the content could be and how these

"symbols are encoded with data generated from the content." Applicant is asked to point to

sections of the specification and drawing in their explanation as to how one can encode symbols

with data generated from the content or Amend this limitation out.

10.   All other claims not specifically mentioned above are rejected for their dependence on

the above claims.

11.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

12.   Claims 1 – 12, 14, 17 – 26, 29, 37 – 62 and 65 – 94 are rejected under 35 U.S.C. 112,

second paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

13.   Claims 1, 38, 44, 56, 65, 67, 72, 75, 87 and 93 recite the limitations of, "pseudorandom

set of output symbols," which is not specifically mentioned in the specification as to what would

consist of a pseudorandom set of output symbols. Applicant is asked to explain using sections of

the specification and drawings as to what would make an output symbol "pseudorandom".

14.   The term " desired accuracy " in claims 1, 2, 38, 44, 53, 56, 62, 65, 67, 72, 75, 78, 87, 90

and 93, is a relative term which renders the claim indefinite. The term " desired accuracy " is not

defined by the claim, the specification does not provide a standard for ascertaining the requisite

degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the

invention. The specification is void of what would be a suitable "standard" or a desired accuracy

nor what percentage or some sort would be substantial for the Applicant's "desired accuracy".

15.   All other claims not specifically mentioned above are rejected for their dependence on

the above claims.

Claim Rejections - 35 USC § 103

16.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the
> manner in which the invention was made.

17.   Claims 1 – 12, 17, 18, 26, 37 – 62, 65 – 83 and 87 – 94 are rejected under 35 U.S.C.

103(a) as being unpatentable over Schuster et al. (5870412) (hereinafter Schuster) in view of

Samuel et al. (6018766) (hereinafter Samuel) in further view of Barbir (6122379).

18.   Referencing claim 1, as closely interpreted by the Examiner, Schuster teaches a method

of serving content between multiple nodes via a network, the method comprising:

19.   maintaining independent sessions with each of a plurality of nodes, wherein the number

of clients in the plurality of clients can vary over time, and wherein the start of each session and

the end of each session can be independent of the start and end of other sessions, (e.g. col. 6,

lines 31 – 48, "...*the present invention may equally extend to separate and independent*

transmission of packets... ";

20.   receiving a stream of packet payloads by the content server, each packet payload of the

stream of packet payloads including data generated from the content, wherein each packet

payload in at least a subset of the stream of packet payloads includes a different set of data, (e.g.

col. 3, lines 6 – 14);

21.   transmitting from a node each packet payload in the stream of packet payloads to each

client of the plurality of clients in corresponding packets, wherein each packet payload

transmitted at any particular time to some or all of the plurality of clients is independent of which

packet payloads had been previously correctly received by various ones of the clients, and

wherein each of the plurality of clients is capable of reconstructing the content after correctly

receiving a number of different output symbols sufficient in quantity to reconstruct the data to a

desired accuracy from those different output symbols, (e.g. col. 1, lines 44 – 55, *"TCP protocol,*

acknowledgement" & col. 6, lines 31 – 48), but does not specifically teach that the nodes are

server nodes and client nodes;

22.   a random or pseudorandom set of symbols encoded; and

23.   the packet payload transmitted to a client at any particular time is independent of the

number of packets previously received by each of the clients.

24.   Samuel teaches the nodes are server nodes and client nodes, (e.g., col. 13, line 59 – col.

14, line 24); and

25.   the packet payload transmitted to a client at any particular time is independent of the

number of packets previously received by each of the clients, (e.g., col. 21, line 45 – col. 22, line

54 & Figures 6 and 7). It would have been obvious to one of ordinary skill in the art at the time

the invention was made to combine Samuel with Schuster because utilizing a server to

coordinate communications between a group of users provides an efficient means for a group of

users to send messages to each other at a rapid rate during the implementation of a networked

interactive application, (e.g., col. 22 *et seq.*).

26.   Barbir teaches a random or pseudorandom set of symbols encoded, (e.g., col. 6, line 66 –

col. 7, line 21). It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Barbir with the combine system of Schuster and Samuel because

in order to update randomly an internal state, the value of at least one variable must be updated

randomly. This technique results in modelers with variable internal structure. This variability

enables the compression of the data in a secure fashion.

27.   Referencing claim 2, as closely interpreted by the Examiner, Schuster teaches the content

comprises an ordered set of input symbols, wherein each packet payload of the stream of packet

payloads includes at least one output symbol, wherein output symbols are generated from input

symbols, and wherein a client can regenerate the ordered set of input symbols to a desired

accuracy from the output symbols included in a set of packet payloads received by the client,

(e.g. col. 5, line 51 – col. 6, line 15).

28.   Referencing claim 3, as closely interpreted by the Examiner, Schuster teaches the set of

packet payloads received by the client can be received via a plurality of distinct sessions, (e.g.

col. 1, lines 44 – 55, *"TCP protocol, acknowledgement"* & col. 6, lines 31 – 48).

29.   Referencing claim 4, as closely interpreted by the Examiner, Schuster teaches the output

symbols are generated from input symbols using a FEC code, (e.g. col. 3, lines 49 – 65).

30.   Referencing claim 5, as closely interpreted by the Examiner, Schuster teaches the output

symbols are generated from input symbols such that the ordered set of input symbols can be

regenerated using any set of N number of the output symbols, wherein N is ml integer greater

than 1 and less than the number of possible output symbols, (e.g. col. 7, lines 39 – 53, *"sequence*

number").

31.   Referencing claim 6, as closely interpreted by the Examiner, Schuster teaches the output

symbols are input symbols, (e.g. col. 7, lines 39 – 53, *"sequence number"*).

32.   Referencing claim 7, as closely interpreted by the Examiner, Schuster teaches the packets

are unicast packets, (e.g. col. 1, lines 44 – 55, *"TCP protocol, acknowledgement" The receiving*

end is then typically configured to acknowledge receipt of packets and expressly request the

sending end to re-transmit any lost packets." **Applicant is reminded that IP, TCP and UDP are unicast protocols.).**

33.   Referencing claim 8, as closely interpreted by the Examiner, Schuster teaches the unicast packets are UDP unicast packets, (e.g. col. 1, lines 44 – 55, *"TCP protocol, acknowledgement" The receiving end is then typically configured to acknowledge receipt of packets and expressly request the sending end to re-transmit any lost packets."* **Applicant is reminded that IP, TCP and UDP are unicast protocols.).**

34.   Referencing claim 9, as closely interpreted by the Examiner, Schuster teaches the unicast packets are TCP packets, (e.g. col. 1, lines 44 – 55, *"TCP protocol, acknowledgement" The receiving end is then typically configured to acknowledge receipt of packets and expressly request the sending end to re-transmit any lost packets."* **Applicant is reminded that IP, TCP and UDP are unicast protocols.).**

35.   Referencing claim 10, as closely interpreted by the Examiner, Schuster teaches maintaining a list of the plurality of clients, (e.g. col. 4, lines 1 – 9, *"router"*).

36.   Referencing claim 11, as closely interpreted by the Examiner, Schuster does not specifically teach receiving, via the network, a message from a client not included in the list of the plurality of clients, requesting to be added to the list; and

37.   adding the client to the list.

38.   Samuel teaches receiving, via the network, a message from a client not included in the list of the plurality of clients, requesting to be added to the list, (e.g. col. 17, line 49 – col. 18, line 3 & col. 18, lines 28 – 50); and

39.   adding the client to the list, (e.g. col. 17, line 49 – col. 18, line 3 & col. 18, lines 28 – 50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Samuel with Schuster because it would be more efficient for a system to have the ability to add or remove clients from the system so to update the list on changes in the network with client being added to a network or taken off. Furthermore, this will save storage space on the device that has the list of clients.

40.   Referencing claim 12, as closely interpreted by the Examiner, Schuster does not specifically teach receiving, via the network, a message from a client included in the list requesting to be removed from the list; and

41.   removing the client from the list.

42.   Samuel teaches receiving, via the network, a message from a client included in the list requesting to be removed from the list, (e.g. col. 18, line 51 – col. 19, line 9); and

43.   removing the client from the list, (e.g. col. 18, line 51 – col. 19, line 9). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Samuel with Schuster because of similar reasons stated above.

44.   As to claim 17, as closely interpreted by the Examiner, Schuster does not specifically

teach adding a client to the list upon receiving, via the network, a connection message from the

client; and

45.   removing the client from the list at a time subsequent to the time at which the connection

message was received form the client.

46.   Samuel teaches adding a client to the list upon receiving, via the network, a connection

message from the client, (e.g., col. 16, lines 55 – 62); and

47.   removing the client from the list at a time subsequent to the time at which the connection

message was received form the client, (e.g., col. 4, line 50 – col. 5, line 15, *"These lists are*

updated when hosts join or leave multicast groups." & col. 16, lines 55 – 62). It would have

been obvious to one of ordinary skill in the art at the time the invention was made to combine

Samuel with Schuster because dividing users among groups could aid in sending specific

information to only those groups of interest while leaving other groups to only receive

information pertaining to them in a router.

48.   Referencing claim 37, as closely interpreted by the Examiner, Schuster does not

specifically teach maintaining a multicast session, wherein a plurality of multicast clients can

join the multicast session, wherein the number of the plurality of multicast clients joined to the

multicast session can vary over time;

49.   transmitting, via the multicast network, each packet payload in the stream of packet

payloads to each multicast client of the plurality of multicast clients in corresponding multicast

packets.

50.   Samuel teaches maintaining a multicast session, wherein a plurality of multicast clients

can join the multicast session, wherein the number of the plurality of multicast clients joined to

the multicast session can vary over time, (e.g. col. 4, lines 32 – 49);

51.   transmitting, via the multicast network, each packet payload in the stream of packet

payloads to each multicast client of the plurality of multicast clients in corresponding multicast

packets, (e.g. col. 4, lines 32 – 49). It would have been obvious to one of ordinary skill in the art

at the time the invention was made to combine Samuel with Schuster because of similar reasons

stated above.

52.   Claims 18, 26, 38 – 62, 65 – 83 and 87 – 94 are rejected for similar reasons as stated

above.

53.   Claims 19 – 22 and 84 – 86 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Schuster, Samuel and Barbir as applied above, and in further view of Lim et al. (6434619)

(hereinafter Lim).

54.   As per claim 19, as closely interpreted by the Examiner, Schuster, Samuel and Barbir do

not specifically teach the first join message includes a time value that indicates when to remove

the corresponding client from the list includes removing the corresponding client from the list at

a time based on the time value. Lim teaches the first join message includes a time value that

indicates when to remove the corresponding client from the list includes removing the

corresponding client from the list at a time based on the time value, (e.g., col. 12, lines 14 – 35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Lim with the combine system of Schuster, Samuel and Barbir because if the user is inactive for an extended period of time, resources are not in use and are wasted when they could be used on a client that is actively utilizing the network. Therefore, removing a client after a period of time of inactivity would free up resources that could be used on active clients.

55.   Claims 20 – 22 and 84 – 86 are rejected for similar reasons as stated above.

56.   Claims 14 and 23 – 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schuster, Samuel and Barbir as applied above, and in further view of Merriman et al. (5948061) (hereinafter Merriman).

57.   Referencing claim 14, as closely interpreted by the Examiner, Schuster, Samuel and Barbir do not specifically teach transmitting to the client not included in the list of the plurality of clients a cookie, and wherein adding the client to the list includes adding the client to the list, only if the message received from the client includes the cookie.

58.   Merriman teaches transmitting to the client not included in the list of the plurality of clients a cookie, and wherein adding the client to the list includes adding the client to the list, only if the message received from the client includes the cookie, (e.g. col. 5, lines 10 – 33). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Merriman with the combine system of Schuster, Samuel and Barbir because the cookie would aid in the user being recognized by the system as recurring member of the network.

59.   Claims 23 – 25 are rejected for similar reasons as stated above.

Response to Arguments

60.   Applicant's arguments with respect to claims 1 – 12, 14, 17 – 26, 29, 37 – 62 and 65 – 94

have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

61.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

62.   a.   Hashimoto et al. U.S. Patent No. 6788654 discloses Digital data receiver.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to David E. England whose telephone number is 571-272-3912.

The examiner can normally be reached on Mon-Thur, 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David E. England
Examiner
Art Unit 2143

DE *DL*
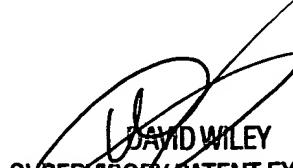
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